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10/630,832	07/31/2003	Naoya Hashimoto	32011-191466	8140

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EXAMINER	
DAVENPORT, MON CHERI S	

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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/630,832	HASHIMOTO ET AL.	
	Examiner	Art Unit	
	MON CHERI S. DAVENPORT	2616	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *17 March 2008*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *2-21* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *2-21* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

Continued Examination Under 37 CFR 1.114

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 3/17/2008 has been entered.

Claim Rejections - 35 USC § 103

1. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

2. **Claims 2-16,19, and 21** rejected under 35 U.S.C. 103(a) as being unpatentable over Ebina et al. (US Patent application Publication 2001/0003525) in view of Sun et al. (US patent number 6,751,213).

Regarding **Claim 21** Ebina et al in view of Sun et al. disclose a communication control device comprising:

a plurality of processor interfaces having one or more cell distributors and one or more selectors, in which each of said processors is connected to one of said cell distributors and one of said selectors ***(Ebina et al., figure 2, section 11 (cell distributor) and 14 (selector)) (Sun et al., see col. 2, lines 38-42, a node has a data packet and a voice packet ready to transmit, the node will transmit the voice packet after receiving a token authorizing it as the next to transmit)***;

an internal communication path which connects said cell distributors(figure 2, section 12, user cell receiving section) and said selectors(figure 2, section 13, user cell transmitting section)

a first external communication path(figure 2, section 101, upstream transmission line), and a second external communication path (figure 2, section 102, downstream transmission line) ***(Ebina et al, see figure 2,)***wherein***:***

said cell distributors receive communication cells from said internal communication path and transfer the received cell to the corresponding processor when the destination of the received cell is the corresponding processor ;***(Ebina et al. , see figure 2, section 11, ATM switch, see paragraph [0020] lines 3-9, ATM switch for terminating a cell input from the upstream transmission line and transferring) (Sun et al. , see col. 2, lines 64-65 and col. 3, lines 7-8, network node receives a packet, and transmits after receiving a packet with its address as the next to transmit)***;

said selectors receive communication cells from said corresponding processor and output the communication cells onto said internal communication path when possessing a transmission rights ***(Ebina et al. , see figure 2, section 14, line control MPU, see paragraph [0020], lines 10-12, line control MPU for receiving control data output from the user cell receiving section and outputting response data to the user cell transmitting section) (Sun et al. see col 3, lines 6-8, The transmission of tokens requesting a retransmission is done when it is the nodes turn to transmit after receiving a token with its address as next to transmit (transmission rights))***; and

said transmission rights is granted to only one selector at the same time and the selector abandons the transmission rights when the selector ends the outputting of the communication cells received from the corresponding processor; and ***(Ebina et al., see paragraph [0026], lines***

1-3, processing is sequentially repeated by the nodes, from 1-3 to 1-n, each node has transmission rights sequentially)(Sun et al., see col. 2, lines 39-41, the node will transmit the voice packet after receiving a token authorizing it as the next to transmit)

wherein the communication control device processes said communication cells received from the first external communication path and transmits the communication cells to the second external communication path.(see figure 2, section 101, upstream transmission line (first external path), and section 102, downstream transmission line(second external communication path).

However Ebina et al. fails to specifically point out a plurality of processors, which perform predetermined parallel processing cooperatively as claimed.

Sun et al teaches a plurality of processors, which perform predetermined parallel processing cooperatively ***(see figure 2, network nodes in parallel, see col. 5, lines 66-67, plurality of network nodes connected in parallel to a shared channel).***

Therefore it would have been obvious to one with ordinary skill in the art at the time the invention was made to combine Ebina et al. invention with Sun et al. because it will provide a guaranteed bandwidth allocated to each node connected to the channel (see Sun et al. col. 2, lines 15-17).

Regarding **Claim 2** Ebina et al. discloses everything as applied above (*see claim 21*). In addition the communication control device includes:

wherein said internal communication path connects said cell distributors and said selectors in a ring***(see figure 1, see paragraph, [0017] lines 3-5, the ATM ring network system has plurality of nodes connected in a ring shape).***

Regarding **Claim 3** Ebina et al. discloses everything as applied above (*see claim 2*). In addition the communication control device includes:

comprising a token cell generator **(see figure 2, section 14, MPU)** for generating a token cell used to grant said transmission rights to one of said selectors, and outputting said token cell onto said internal communication path ***(see paragraph [0023], the user cell transmitting section writes the control data from the MPU to the broadcasting control data portion to assemble the cell and outputs the assembled cell to the downstream transmission line through the ATM switch).***

Regarding **Claim 4** Ebina et al. discloses everything as applied above (*see claim 3*). In addition the communication control device includes:

wherein said token cell generator is said selector ***(see figure 2, section 14, line control MPU).***

Regarding **Claim 5** Ebina et al. discloses everything as applied above (*see claim 3*). In addition the communication control device includes:

wherein said token cell generator is provided in said cell distributor***(see figure 2, section 14, line control MPU, see paragraph [0025] lines 1-4, the MPU executes the control in the***

devices in accordance with the received control data and outputs the control results to the user cell transmitting section as response data) .

Regarding **Claim 6** Ebina et al. discloses everything as applied above (*see claim 3*). In addition the communication control device includes:

wherein said selector outputs a communication cell received from a connected processor onto said internal communication path when said token cell is possessed thereby***(see figure 2, section 14, line control MPU, see paragraph [0025], the MPU executes the control in the devices in accordance with the received control data and outputs the control results to the user cell transmitting section as response data. After the cell is transferred to the node as a downstream device through the ATM switch)***.

Regarding **Claim 7** Ebina et al. discloses everything as applied above (*see claim 3*). In addition the communication control device includes:

wherein said selector outputs said token cell onto said internal communication path after outputting all of the communication cells received from a connected processor ***(see paragraph [0026], the processing operation is sequentially repeatedly executed by the nodes until the cell is received from the last node).***

Regarding **Claim 8** Ebina et al. discloses everything as applied above (*see claim 21*). In addition the communication control device includes:

wherein said internal communication path comprises a common bus connected to said cell distributors and said selectors ***(see figure 1, see paragraph [0017], lines 1-5, figure 1 shows an ATM ring network system, connected into a ring shape)***.

Regarding **Claim 9** Ebina et al. discloses everything as applied above (*see claim 8*). In addition the communication control device includes:

comprising a transmission rights manager for granting said transmission rights to one of said selectors***(see paragraph [0023], the user cell transmitting section writes the control data from the MPU to the broadcasting control data portion to assemble the cell and outputs the assembled cell to the downstream transmission line through the ATM switch)***.

Regarding **Claim 10** Ebina et al. discloses everything as applied above (*see claim 9*). In addition the communication control device includes:

wherein, when a request for transmission rights is received from one of said selectors, said transmission rights manager grants transmission rights to said selector after another selector has lost transmission rights ***(see paragraph [0026], the processing operation is sequentially repeatedly executed by the nodes until the cell is received from the last node, and see paragraph [0027], the cell from the node(s) through the upstream transmission line is received by the user cell receiving section through the ATM switch and the contents of the flags and response message portions corresponding to the other nodes).***

Regarding **Claim 11** Ebina et al. discloses everything as applied above (*see claim 9*). In addition the communication control device includes:

wherein said transmission rights manager is provided in each of said processor interfaces*(see figure 2, paragraph [0011], is a block diagram of each node in the system).*

Regarding **Claim 12** Ebina et al. discloses everything as applied above (*see claim 11*). In addition the communication control device includes:

wherein, when a request for transmission rights is received from one of said selectors, said transmission rights manager grants said transmission right to the selector after receiving information indicating the assignment or loss of said transmission rights from another transmission rights manager*(see paragraph [0026], the processing operation is sequentially repeatedly executed by the nodes until the cell is received from the last node, and see paragraph [0027], the cell from the node(s) through the upstream transmission line is received by the user cell receiving section through the ATM switch and the contents of the flags and response message portions corresponding to the other nodes)*.

Regarding **Claim 13** Ebina et al. discloses everything as applied above (*see claim 21*). In addition the communication control device includes:

wherein said processor interface comprises a buffer unit **(MPU)** for temporarily storing communication cells transferred to a connected processor from said cell distributor*(see figure 2, section 14, line control MPU, see paragraph [0023], the user cell transmitting section writes the control data from the MPU to the broadcasting control data portion to assemble the cell and outputs the assembled cell to the downstream transmission line through the ATM switch).*

Regarding **Claim 14** Ebina et al. discloses everything as applied above (*see claim 13*). In addition the communication control device includes:

wherein said buffer unit comprises ***(see paragraph [0023]):***

a buffer for temporarily storing communication cells ***(see figure 2, section 14, MPU);***

a cell writer for writing communication cells received from said cell distributor to said buffer***(see figure 2, section 12, user cell receiving section);*** and

a cell reader for reading the communication cells stored in said buffer and transmitting the communication cells to said processor ***(see figure 2, section 13, user cell transmitting section).***

Regarding **Claim 15** Ebina et al. discloses everything as applied above (*see claim 21*). In addition the communication control device includes:

wherein said processor interface comprises a buffer unit for temporarily storing communication cells transmitted from said processor to said selector***(see figure 2, section 14, MPU, paragraph [0023], user cell transmitting section writes the control data from the MPU).***

Regarding **Claim 16** Ebina et al. discloses everything as applied above (*see claim 15*). In addition the communication control device includes:

wherein said buffer unit comprises***(see paragraph [0023]):***

a buffer for temporarily storing communication cells ***(see figure 2, section 14, MPU);***

a cell writer for writing communication cells received from said processor to said buffer***(see figure 2, section 12, user cell receiving section);*** and

a cell reader for reading the communication cells stored in said buffer and transmitting the communication cells to said cell distributor ***(see figure 2, section 13, user cell transmitting section).***

Regarding **Claim 19** Ebina et al. discloses everything as applied above (*see claim 21*). In addition the communication control device includes:

comprising a connection switch for connecting said internal communication path to one or a plurality of externals ***(nosed 2-2 to 2-n) (see figure 5, section 21, ATM SW, see paragraph[0005], when the ATM cell containing control data is broadcast from the nodes 2-1 for control, the ATM switch in each of the nodes branches a cell. In addition, in each of the nodes to an ATM cell containing response data generated by the user cell transmitting section is sent to the node through the ATM switch).***

Claim Rejections - 35 USC § 103

1. Claims **17-18, and 20** rejected under 35 U.S.C. 103(a) as being unpatentable over Ebina et al. (US Patent Application Publication 2001/0003525) in view of Ikeda et al. (US Patent Number 5,896,501).

Regarding **Claim 17** Ebina et al. discloses everything as applied above (*see claim 21*). However Ebina et al. fails to specifically disclose that the processor interface comprises a format converter for converting the format of communication cells received from another of said processor interfaces via said internal communication path as claimed.

Ikeda et al. discloses wherein said processor interface comprises a format converter for converting the format of communication cells received from another of said processor interfaces

via said internal communication path ***(see Ikeda et al., figure 1, address translator, see col 5, lines 15-19, the transfer control section writes or reads data to or from the storage according to a real address translated by the inherent address translator section, or the common address translator section, as a result data is transferred between one processor and another).***

Therefore it would have been obvious to a person having ordinary skill in the art at the time the invention was made to provide Ebina et al. ATM ring network with an address translator (format converter) because data can be process in each individual processor not just the main processor to shorten data transfer time, see Ebina et al., col. 1-2, lines 61-4)

Regarding **Claim 18** Ebina et al. discloses everything as applied above (*see claim 21*). However Ebina et al. fails to specifically disclose wherein said processor interface comprises a format converter for converting the format of communication cells to be transmitted to another of said processor interfaces via said internal communication path as claimed.

Ikeda et al. discloses processor interface comprises a format converter for converting the format of communication cells to be transmitted to another of said processor interfaces via said internal communication path ***(see Ikeda et al., figure 1, address translator, see col 5, lines 15-19, the transfer control section writes or reads data to or from the storage according to a real address translated by the inherent address translator section, or the common address translator section, as a result data is transferred between one processor and another).***

Therefore it would have been obvious to a person having ordinary skill in the art at the time the invention was made to provide Ebina et al. ATM ring network with an address translator

(format converter) because data can be process in each individual processor not just the main processor to shorten data transfer time, see Ebina et al., col. 1-2, lines 61-4)

Regarding **Claim 20** Ebina et al. discloses everything as applied above (*see claim 19*). However Ebina et al. fails to specifically disclose the communication control device comprising a format converter for converting the format of communication cells received onto said internal communication path from said externals and the format of communication cells to be transmitted to said externals from said internal communication path as claimed.

Ikeda et al. discloses the communication control device comprising a format converter for converting the format of communication cells received onto said internal communication path from said externals ***(see Ikeda et al., figure 1, address translator, see col 5, lines 15-19, the transfer control section writes or reads data to or from the storage according to a real address translated by the inherent address translator section, or the common address translator section, as a result data is transferred between one processor and another)*** and the format of communication cells to be transmitted to said externals from said internal communication path ***(see figure 3, see col ,2, lines 28-32, a transfer control section write or reads data to or from a storage according to the real address translated by the inherent address translator section or by the common address translator section, thus data is transferred between the one processor and another processor).***

Therefore it would have been obvious to a person having ordinary skill in the art at the time the invention was made to provide Ebina et al. ATM ring network with an address translator (format converter) to transmit to external nodes because data can be process in each individual

processor not just the main processor to shorten data transfer time, see Ebina et al., col. 1-2, lines 61-4).

Response to Arguments

2. Applicant's arguments with respect to claim 21 have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to MON CHERI S. DAVENPORT whose telephone number is (571)270-1803. The examiner can normally be reached on Monday - Friday 8:00 a.m. - 5:00 p.m. EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Seema Rao can be reached on 571-272-3174. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Seema S. Rao/

Supervisory Patent Examiner,
Art Unit 2616

/Mon Cheri S Davenport/
Examiner, Art Unit 2616
March 28, 2008